

9.—A Preliminary Note on the Duketon Meteorite

By Michael J. Frost*

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The meteorite, which will be called the Duketon meteorite, was found by H. W. Hill in October, 1948. It was resting on the surface of the ground about 10 miles north of Duketon, Western Australia. This is about 80 miles north of Laverton near Mt. Joanna in the Nuleri Land District and is approximately lat. $27^{\circ} 30' W.$, long. $122^{\circ} 22' E.$ No other fragments were found nearby and no history of this fall exists. Although samples of the meteorite were apparently forwarded to the Western Australian Government Chemical Laboratories soon after its original discovery no description has previously been published.

The meteorite is a typical siderite, somewhat flattened in shape (Plate 1, 1 and 2). Most of the meteorite is marked by the usual thumb-marks but the flattened sole is characterised by large flatly concave surfaces. Only one burnt-out troilite rod about 2 cm in length is present on the surface.

The weight of the meteorite, as received, was 260.7 lb, but small fragments, weighing possibly 2.0 lb, had already been removed. The density of a large piece, including the oxidised crust, was determined as 7.64 grams/c.c. Etching of

a polished surface indicates that the siderite is a typical medium octahedrite with kamacite plates from 1-1.5 mm in width. A few wider irregular bars of kamacite and a number of irregular veinlets, presumably of taenite, are present (Plate 1, 3). Since the Widmanstätten figures run to the edge of the meteorite considerable weathering must have occurred although no rusting can be seen except on the surface.

A small meteorite, the "Nuleri" meteorite, has also been recorded from the Nuleri Land District and as this is also a medium octahedrite the possibility that both belong to the same fall cannot be overlooked. However, in the absence of detailed work and the exact location of the Nuleri meteorite, it is probably safer to consider them as of separate falls.

The main mass of the meteorite is in the museum of the Geology Department of the University of Western Australia (Specimen No. 38228).

My thanks are due to P. A. Hill for donating the meteorite and supplying information about its occurrence. The photographs of the whole meteorite were taken by the late H. Tarlton Phillipps, and the photograph of the etched surface by Mr. F. Billing.

* Department of Geology, University of Western Australia.